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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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May 3, 1988

Mr. Andy King
Genwal Coal Company
P. O. Box 1201
Huntington, Utah 84528

Dear Mr. King:

Re: Five Year Permit Renewal Review, Genwal Coal Company, Crandall Canyon Mine, ACT/015/032, Folder #2, Emery County, Utah

The Division has reviewed the updated Mining and Reclamation Plan (MRP) for the Crandall Canyon Mine submitted on February 16 and 23, 1988 for the five-year permit renewal. Deficiencies have been found in both the organization and content of the MRP, as delineated in the attached review document.

A comprehensive review of the new lease area was not included in this review. Approval for the new lease will be handled separately from the five-year renewal action. Any changes or features proposed in maps or plans within the text of the MRP will not be considered approved until a new five-year permit is issued. In the event that Genwal Coal Company (Genwal) needs to make changes to the approved permit prior to issuance of the new permit, separate requests to modify the permit must be made.

As you are aware, the current permit for the Crandall Canyon Mine will expire on May 13, 1988. It is critical that an adequate response to the deficiencies in the MRP is made in an expedient manner so that a new permit can be issued. The Division is currently developing a policy on dealing with operations whose permits have expired prior to receiving a new permit. This should be received by you shortly.

Please feel free to contact myself or James Leatherwood, Reclamation Soils Specialist, if you have any questions regarding this matter.

Sincerely,

Susan C. Linner

Susan C. Linner
Permit Supervisor/
Reclamation Biologist

djh
Attachments
cc: G. Morris, USFS
L. Braxton
B Team
0028R/73

FIVE-YEAR PERMIT RENEWAL REVIEW

GENWAL COAL COMPANY
CRANDALL CANYON MINE
ACT/015/032
MAY 3, 1988

UMC 771.23 Permit Applications - General Requirements for Format and Contents - JRH

Several errors in referencing maps and sections within the plan were found in the regulation cross-reference and in the Table of Contents. The Division has recently developed a cross-reference which outlines the MRP by the regulations, on a sub-section by sub-section basis. To facilitate ease in completeness reviews, location of specific information within the plan, and inspection of the site against the plan, references to the MRP need to be precise and complete, to locate the section and/or page number in which the specific requirements of a particular sub-section of the regulations can be found. A copy of this cross-reference format is provided in conjunction with this review. This cross-reference is also available on floppy disk in a format acceptable for most word processors. Please resubmit the cross-reference in this format and correct any errors found in the Table of Contents for your MRP.

UMC 771.23 Permit Applications - General Requirements for Format and Contents - JSL

The Table of Contents, page 2-2 of Chapter 2, must be updated. The Table of Contents refers to Plate 2-3. Plate 2-3 has been deleted from the MRP. Please update the Table of Contents.

UMC 771.23 Permit Applications - General Requirements for Format and Contents - RS

Figures 7-13 and 7-14 are current through 1984. These should be updated to include information current to this permit date.

Appendix 7-3 contains surface water monitoring data current through 1985. The applicant should submit water quality and flow data for these sites current with this permit application. Additionally, this data should be summarized and a narrative included discussing the results and conclusions of the monitoring program to date.

The original application contained Table 7-5a, a summary of water quality data for Crandall Creek. This table was not located in the resubmission. This table should be included and updated to include data collected since the last permit review.

UMC 783.15 Ground Water Information - DWD

The applicant has attempted to describe the ground water hydrology for the proposed permit area. The applicant has provided information describing the depth of ground water below the surface. Ground water above the mine exists as perched aquifers, and below the mine ground water is found in the Star Point Sandstone, which acts as a regional aquifer for the Wasatch Plateau.

The applicant has not provided sufficient information to establish the characteristics of the aquifers. Additional ground water information is needed for this permit. The applicant should submit detailed potentiometric surface data to identify the gradient of ground water within the Star Point Sandstone.

UMC 783.17 Alternative Water Supply Information - RS

Although the application presents a discussion of the possibility of water supply contamination or diminution (with a conclusion that the operation will not impact the sources), a mine operation has the possibility to impact water resources. The possibility has been minimized at the site due to implementation of sediment control structures; and an adequate monitoring program has been implemented to detect any impacts. However, the applicant is requested to submit information identifying alternative sources of water supply that could be developed to replace the existing sources. Typically this regulation is satisfied by simply adding a paragraph to the MRP that identifies water rights that could be purchased or transferred if impacts occur.

UMC 783.19 Vegetation Information - LK

Plate 9-4 does not have the map scale noted.

UMC 783.21 Fish and Wildlife Information - LK

Chapters 9 and 10 are redundant to the extent the "Terrestrial Wildlife and Habitat" report (pages 40-66) prepared by Valley Engineering is presented in both chapters. It is suggested that this section (dealing with wildlife) be eliminated from chapter 9 (vegetation chapter).

Plate 10-1 needs to show the location of the Golden Eagle nest that is located ca. .8 km northeast of the portal area (as reported inspection 10.3.3.2 and on page 40 of Item 10-3). As per comments made by the Utah Division of Wildlife Resources (DWR), numerous raptor surveys have been conducted in the Crandall and Huntington Canyon areas since 1980. Appropriate map data and narrative regarding raptor nests in the vicinity of the permit need to be

incorporated into the MRP. This data is available from DWR. For example, comments regarding bald eagles (Item 10-3, page 43) are outdated. Bald eagles are regularly observed in the Huntington Canyon area and would be expected to utilize the environs of Crandall Canyon during the winter season.

On page 7-36 (section 7.1.5) it states, "that these springs represent an insignificant resource to the local wildlife." Please note, ALL seeps and springs area considered to be of critical value to the local wildlife. The referenced statement needs to be corrected to relay this message. The Earthfax report concerning use of seeps and springs by big game is not acceptable. Several inspections during the year would be needed (not just one) to provide a reasonable assumption concerning deer and elk use (also, refer to comments under section UMC 784.21).

Page 3.23 (section 3.4.6.1) states that no fisheries exist within or adjacent to the permit area. This needs to be corrected since fisheries do exist in Huntington Creek and Crandall Creek (DWR has classified Crandall Creek as a high priority valued Class III fishery with natural reproduction of 278 cutthroat trout per mile and a standing trout biomass of 53 lb./surface acre). These streams are adjacent to the permit area, the tract III lease area and Topsoil Pile #3 (refer to comments under section UMC 784.21 as well). Item 10-2, Aquatic Resources of Crandall Canyon is outdated and does not accurately reflect the current state of knowledge for Crandall Creek's fishery and should be updated.

The DWR has made several comments regarding wildlife as a whole that need to be updated in the MRP. For example, all amphibians and reptiles in Utah are protected species (see pages 49,55 and 56 of Item 10-3). Information regarding the seasonal distributions of deer elk and moose (see page 3-24, section 3.4.6.2) is in error. The use of wildlife on the permit area is not limited to just big game species (see page 4-6, section 4.4.2). As many as 239 vertebrate species of wildlife have the potential to utilize the environs of the permit area.

UMC 783.24-.25 Maps: General Requirements, Cross Sections, Maps, and Plans - JRH

The MRP references Plate 3-2. This drawing does not exist in the MRP. The operator shall provide this drawing or shall properly reference the correct drawing in the plan. Reference to Drawing 3.2 is made several times in Chapter 3 of the MRP.

Plate 3-2A indicates the proposed surface facilities for the Crandall Canyon Mine. Boundaries provided on the drawing are not correct. The disturbed area boundary is not completely and properly delineated on the drawing. The southern border of the disturbed

area boundary is not included on the drawing. The operator has not included the diversions as part of the disturbed areas. No acreages are found on the drawing. Small area exemptions must also be indicated on the drawing, as well as their respective acreages. The drawing must be made to show the total number of acres which are included in the disturbed area boundary and the total number of exempt area acres. Additionally, those undisturbed areas that lie within the disturbed areas should also have their respective acreages included.

Plate 3-2B indicates that the operator has conducted underground mining activities outside of the permit area and closer than 100 feet of the lease area boundaries. The operator shall include on this drawing and in the text of the MRP, sufficient justification and delineation of the permit area to reflect these inconsistencies in the MRP.

Cross sections found on Plate 3-4 are not clear as to what they depict. These cross sections should be modified to show: (1) The original surface configuration; (2) The sections of the facilities during mining operations, and (3) The post-reclamation contours.

UMC 783.25 Cross-sections, Maps, and Plans - DWD

The applicant has not submitted the mining and mine sequence maps for the permit area.

The applicant has to submit a map depicting all mined areas. The map should depict the sequence of mining, type of mining and recovery ratio.

UMC 784.11 Operation Plan: General Requirements - JSL

Section 3.2.10, page 3-10, states that the Class III road is leading to the substation pad. This pad is not a substation pad.

Under Section 3.2.10, page 3-10, the MRP inaccurately refers to the Class III road as leading to the transformer pad, when in fact the road actually leads to the powder magazine pad. Please update the MRP to reflect the actual pad use.

Section 3.3.5.2 should be updated to include the gate at the entrance of the Class III road, as delineated on Plate 3.1.

Section 3.2.10 refers to Figure 3.1. Figure 3.1 was not included in the MRP. Please submit Figure 3.1.

UMC 784.12 Operation Plan: Existing Structures - JRH

This section is not considered to be adequate. The operator has not referenced or included the requirements of this section within the MRP. The operator must include and reference this section of the regulations. It is evident that there were no previously existing structures used in conjunction with underground coal mining activities, but the operator must so state in the MRP.

UMC 784.13 Reclamation Plan: General Requirements - LK

There is an acreage discrepancy regarding the area disturbed. Pages 1-3 and 3-11 indicate 5.73 acres to be disturbed while pages 3-27 and 9-5 indicate 6.65 acres disturbed. Please correct this and check to see that it correlates with other locations in the MRP that show disturbed acreage.

There are no seed mixes listed in chapter 9 or in section 3.5.5 (as referenced on pages 3-6 or 3-27) for topsoil protection. Please provide the seed mix(es) that have been used in the past as well as those proposed for future use.

The proposed seed mixes need revision in that they contain several introduced species (with no documentation that the criteria of UMC 817.112 is satisfied) and that there are several species that are not available from commercial seed sources. The Division can assist in modifying your seed mixes to meet current needs.

References on page 3-41 and plates 3-4 and 7-5 indicate that part of the "wooded" area has undergone final reclamation. Please note that the revegetation plans for this area call for the planting of trees and shrubs. The reclamation of this area must be completed during the first (next) available planting season (refer to rule UMC 817.100).

The standards for revegetation success are not correctly stated on page 3-44. For wildlife habitat, the minimum standards for cover, woody plant density and productivity are 70% of the reference area (standard) with 90% statistical confidence (for cover only) and 90% of the standard with 80% statistical confidence (for density and productivity). Please correct (refer to rule UMC 817.116).

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - DWD

Detailed potentiometric surface data are not available for the area surrounding the permit area. The applicant quotes a U.S. Geological Survey report (Danielson, 1981, Hydrology of the Coal Resource Areas in the Upper Drainages of Huntington and Cottonwood Creeks, Central Utah) that suggests that ground water in much of the area moves from high areas of recharge to low areas of drainage, principally along stream channels.

The Star Point Sandstone which directly underlies the Hiawatha coal seam is considered a regional aquifer which serves as a recharge source for springs throughout the Wasatch Plateau.

During the period of March and April of 1987, a single monitoring well (MW-1) was installed at the Crandall Canyon Mine at the location shown in Figure 7-4. The well encountered the Star Point Sandstone through its entire depth and contacted water at 315 feet. The static water level in the well rose to the 186-foot depth after one week.

The information garnered from this single well does not provide the necessary information to establish the effects of mining on springs north of the property that are supplied by the Star Point aquifer.

The applicant shall submit plans to study and analyze the Star Point aquifer for areal extent and piezometric levels on and adjacent to the mine plan area by June 30, 1988. The applicant shall supply initial baseline monitoring data and a piezometric surface map for the Star Point Sandstone Aquifer by August 31, 1988.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - JSL

Figure 7-20, page 7-78, fails to identify all surface and ground water stations. According to the Table of Contents, the heading of Figure 7-20 is "Location of Surface and Ground Water Monitoring Stations", not "Location of Surface Water Monitoring Stations", as presented in Figure 7-20. Please amend.

UMC 784.14 Reclamation Plan: Protection Of Hydrologic Balance - RS

Figure 7-20 should be updated to depict the locations of the NPDES monitoring point(s).

The applicant has proposed a monitoring program for surface waters that is generally consistent with current Division of Oil, Gas and Mining (Division) water quality monitoring guidelines. However, Tables 7-8 and 7-9 should add acidity and total iron to the parameter lists for water quality analysis. The applicant should also commit to submission of a cation-anion balance for all samples.

UMC 784.15 Reclamation Plan: Postmining Land Use - LK

In section 4.4.2 (3rd. paragraph), the MRP fails to address wildlife habitat as part of the current land use of the permit area.

Section 4.5 should have a clear statement regarding the proposed postmining land use, that it is proposed to be the same as the premining land use of wildlife habitat with limited (undeveloped) recreation opportunities.

UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams and Embankments - JRH

The operator has incorrectly referenced this section of the regulations to Section 3.5.5.3, instead of Section 3.5.3.3. The operator has also referenced Plate 3-5 of the MRP. The operator shall correct the reference to the requirements of this section in the MRP.

UMC 784.16 Reclamation Plan: Ponds, Impoundments, Dams, And Embankments - RS

The application should add narrative to page 7-63 explaining measures to protect or reinstall the clay liner in the sedimentation pond following cleanout operations.

The application should contain the certification report for the sedimentation pond discussed on page 7-64 in this application.

Section 3.5.1 should be revised to include a commitment to achieve the cover values for the contemporaneous reclamation areas used in the design of the sedimentation pond prior to the end of the 1989 growing season. This narrative should also include an alternative plan to be implemented if the values are not achieved.

The Division's analysis of the predicted sediment storage volume presented on page 7-58 of Chapter 7, and in Appendix 7-4, resulted in differing values for the period of design storage. The application presented USLE calculations that resulted in a predicted sediment storage volume for a period of ten (10) years. However, the Division's calculations show the period to be approximately three years. The differences result from the use of the assumption values in the calculations. The Division calculations were performed using soils information and the topographic maps of the site presented in the permit. The following table summarizes the review:

Reclaimed Areas:

Parameter	DOGM VALUE	Genwal Value
R	28.12	26
K	0.15	0.15
LS	23.87	21.66
CP	0.01	0.01
Area	1.75 Ac	2.0 Ac

Undisturbed Areas:

Parameter	DOGM VALUE	Genwal Value
R	28.12	26.0
K	0.27	0.15
LS	67.1	42.92
CP	0.007	0.005
Area	5.84 Ac	5.7 Ac

These values were based upon the following: (1) R values include snow and rain (Isrealson, 1984); (2) K values include the average of three (3) areas calculated by the Division soil scientist based upon the soil survey information in the permit; and (3) the CP factor for the undisturbed areas was based upon a 50% cover as presented in the permit.

This is not a critical concern. These values are predicted values and if the calculations prove to be an inaccurate prediction of the sediment delivered to the pond, the resultant effect would be a more frequent sediment pond cleanout. The Division may approve a design volume for a period of three years. The Division's calculations demonstrate that the pond has the capacity to contain this volume. The application is approvable if the above pages are revised to reflect a three-year predicted sediment load to the pond.

UMC 784.19 Underground Development Waste - JRH

The operator has indicated that permanent storage of all excess spoil and underground development waste, including sediment pond waste, will be disposed of in the underground mine workings. Temporary storage of any materials brought to the surface, and the sediment pond waste, shall be located at the west end of the coal stockpile. This section is considered to be complete and adequate. However, the operator should realize that in the event that MSHA disallows the storage or disposal of any of this waste material, that a suitable location within the permit area must be determined and approved prior to disposal. Due to the limited amount of surface storage area, such requirements may prove to hamper mining operations during a permitting process for the location of permanent waste disposal facilities on the surface. In no event shall the Division allow for this material to be permanently disposed of outside a permitted area or in a landfill.

UMC 784.20 Subsidence Control Plan - DWD

The applicant has presented a subsidence control plan in Section 12 of the MRP. The applicant has conducted a survey for structures and renewable resources. Although no structures exist, renewable resources do exist in grazing and ground water sources.

The applicant commits, in the MRP, to implement a subsidence control monitoring plan in cooperation with the U.S. Forest Service. However, neither baseline or surveillance data has been provided for subsidence monitoring.

The applicant shall establish a subsidence monitoring program that will provide baseline information with regard to the areas being mined; conduct annual subsidence monitoring surveys; and provide annual subsidence monitoring reports to the Division.

UMC 784.21 Fish and Wildlife Plan - LK

Please provide 'as-built' designs for the power poles that demonstrate that they were constructed to meet raptor protection technology.

The MRP needs to address the potential impacts on raptor nests due to subsidence and propose appropriate mitigation.

The MRP should have a discussion in section 3.4.6.2 regarding the measures implemented to prevent impacts to the fisheries that are adjacent to the permit area.

Page 3-25 (section 3.4.6.2) needs to be corrected to accurately describe the seep and spring impacts and mitigation plans which were approved in the tract II permit.

UMC 784.22 Diversions - RS

The application contains details of the as-built designs for the diversions at the site. These designs appear to be detailed and contain adequate information to proceed with a technical review. The review will be performed by the Division during the next stage of the permitting process.

Page 7-70 and Appendix 7-7 (p. 8 of 27) discuss a flexible downspout for the discharge of UD-1 into Crandall Creek. To date, this spout has not been installed. The application should remove all references to this spout and include an alternative energy dissipation structure as necessary. It is possible that the discharge could be directed to existing bedrock/boulder material to satisfy this requirement.

UMC 784.23 Operation Plan: Maps and Plans - JRH

The cross-reference to this section of the regulations should be broken down into subsections, as previously mentioned in this review.

Refer also to comments made under UMC 783.24-.25 for additional comments regarding maps and plans.

UMC 784.23 Operation Plan: Maps and Plans - JSL

Plate 7.5 inaccurately identifies a bathhouse facility located on the mine parking lot pad. The MRP also discusses the development of a bathhouse facility underground. Please clarify and resubmit Plate 7.5, if the plate is inaccurate.

Section 3.2.3, page 3-7, states that three trailers will be located onsite. The surface facilities map, Plate 3-1, does not identify these facilities. Please update Plate 3-1 or clarify the content of the MRP.

UMC 817.13 Casing and Sealing of Exposed Underground Openings: General Requirements - JRH
UMC 817.14 Casing and Sealing of Exposed Underground Openings: Temporary - JRH
UMC 817.15 Casing and Sealing of Exposed Underground Openings: Permanent - JRH

No backfilling quantities or equipment used for the backfilling of the portals was provided in the MRP. The operator shall further detail the permanent reclamation of the portals in order to determine this section sufficient for reclamation cost determination.

UMC 817.23 Topsoil: Storage - JSL

Page 8-6, Section 8.7, states that the volume of Topsoil Stockpile Three will be evaluated and submitted after construction. This information was not included in the MRP. Please submit the actual volume of stockpiled topsoil/subsoil in Stockpile Three.

UMC 817.24 Topsoil: Redistribution - JSL

Section 8.6, page 8-6, states "A six-inch layer of topsoil on steep slopes may be lost to erosion and require replacement." This is clearly not acceptable. All topsoil materials shall be redistributed in a manner that protects the topsoil from erosion. If erosion is occurring, stabilization practices must be implemented expeditiously. Soil protection measures may include tacking down a mulch blanket. The MRP must clarify this issue.

UMC 817.25 Topsoil: Nutrients and Soil Amendments - JSL

There is an inconsistency with the fertilizer management plan described in the MRP. Section 8.9, page 8-10, states that the fertilizer will be broadcast after topsoil redistribution in late September or October. Section 3.5.6.1, page 3-45, states that the topsoil will be amended prior to redistribution. The Division concurs with plans to redistribute the fertilizer in September or early October after topsoil redistribution. The applicant should

commit not to fertilize from late October to early April because of the increased possibility of surface water degradation occurring from excess available nutrients. Please amend the MRP accordingly.

UMC 817.41 Hydrologic Balance: General Requirements - JSL

Section 7.2.4 does not discuss the underground mine water discharge into Crandall Creek. This section only discusses the discharge from the sediment pond. Section 7.2.4 must be updated to include the underground mine water discharge into Crandall Creek.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds - JRH

Information regarding this section of the regulations is found in Section 7.2 and Figure 7-10 of the MRP. This reference to sedimentation pond design and construction is not complete.

By incorporating the sub-section by sub-section cross reference into the MRP, it will be easier to locate and determine this section complete.

Notably missing in the MRP are the requirements, frequency, and data to be collected from the piezometer located in the embankment of the sediment pond. The operator shall be required to incorporate this information into the MRP in accordance with the requirements for the piezometer as stipulated in the approval for the modification and reconstruction of the sediment pond. This section is not considered to be complete.

UMC 817.49 Hydrologic Balance: Permanent And Temporary Impoundments - JSL

Appendix 7-10, Sedimentation Pond Calculations (As-builts), does not include a discussion on the following:

1) Existing and required monitoring procedures and instrumentation.

2) The elevation of any impounded water at the time of report.

3) A discussion of any fires occurring in the construction material up to the date of certification.

4) A discussion of any other aspects of the dam or embankment affecting stability.

The above outlined items must be included in the certification report by a registered professional engineer.

UMC 817.53 Hydrologic Balance: Transfer Of Wells - RS

A discussion of the plans for the water well (MW-1) following reclamation was not included in the application. The application should describe plugging procedures or intent to transfer the well.

UMC 817.57 Stream Buffer Zones - LK

The MRP (page 2-6) should state that the stream buffer zone variance was granted and provide documentation in an appendix.

UMC 817.71 Disposal of Excess Spoil and Underground Development Waste: General Requirements - JRH
UMC 817.72 Disposal of Underground Development Waste and Excess Spoil: Valley Fills - JRH
UMC 817.73 Disposal of Underground Development Waste and Excess Spoil: Head-of-Hollow Fills - JRH
UMC 817.74 Disposal of Underground Development Waste and Excess Spoil: Durable Rock Fills - JRH

The operator has referenced these sections of the regulation to Section 3.3.9 of the MRP.

This section is not considered to be complete. The operator has not conducted a mass balance of the site in order to determine whether or not there is an excess of spoil or mine development waste on the site in conjunction with reclamation. It is evident that due to the allowance of the Forest Service road in conjunction with post-mining facilities, there will most likely be a shortage of materials on the site, in order to perform reclamation work. The operator needs to address the requirements of this section in conjunction with the requirements of UMC 817.101 Backfilling and Grading.

Although the operator has indicated that underground development waste will be returned to underground workings in this section, he has not made a determination as to the handling of mine development waste in conjunction with the development and construction of the surface facilities.

UMC 817.81 Coal Processing Waste Banks: General Requirements - JRH
UMC 817.82 Coal Processing Waste Banks: Site Inspection - JRH
UMC 817.83 Coal Processing Waste Banks: Water Control Measures - JRH
UMC 817.85 Coal Processing Waste Banks: Construction Requirements - JRH
UMC 817.86 Coal Processing Waste: Burning - JRH
UMC 817.87 Coal Processing Waste: Burned Waste Utilization - JRH
UMC 817.88 Coal Processing Waste: Return to Underground Workings - JRH

UMC 817.91 Coal Processing Waste: Dams and Embankments: General Requirements - JRH
UMC 817.92 Coal Processing Waste: Dams and Embankments: Site Preparation - JRH
UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction - JRH

The operator has not referenced these sections of the regulations in the MRP. The operator must include as part of the plan, an indication as to whether or not these regulations are applicable and, at the least, provide in the plan a statement indicating that they are not. These sections of the mining regulations are not considered to be complete.

UMC 817.99 Slides and Other Damage - JRH

The operator has addressed the requirements of this section in parts 12.4 and 12.5 of the MRP.

The referenced section of the MRP does not meet the requirements of this section. The operator needs to provide a commitment in the MRP indicating that he will notify the Division in the event of any slide or other damage which may have a potential adverse effect on public property, health, safety, or the environment. Please include such a commitment in the MRP. This section is not considered to be complete.

UMC 817.101 Backfilling and Grading: General Requirements - JRH

The operator has referenced this section of the regulations to Part 3.5.4 of the MRP and plates 3-1 and 3-5.

No reference as to the mass balance of the materials required for backfilling and grading is made in the MRP. The operator must provide earthwork calculations and a mass balance for the backfilling and grading to be accomplished on the site. The operator shall include suitable cross sections indicating the pre-mining, the mining, and the post-reclamation sections of the site in order to show the cut and fill requirements and in order to determine whether or not the operator has met approximate original contour requirements for the site.

Earthwork calculations shall also include a mass balance for topsoil requirements on the site. These, and the general earthwork calculations, can be provided as part of the bonding calculations which will further require equipment selection and productivity calculations for the backfilling and grading in order to determine the adequacy of the reclamation bond.

In those areas where complete reduction of highwalls along cuts, pads, portals and embankments is not accomplished, the operator shall be required to provide justification for the remaining highwall. This justification shall include, but not be limited to, stability analysis of the highwall and the fill material to be backfilled.

This section is not considered to be complete or technically adequate.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-Forming Materials - JRH

The operator has made no reference in the MRP regarding covering coal and acid- and toxic-forming materials. The requirements of this section have most likely been met in the MRP, but no direct reference to the requirements of this section has been made.

UMC 817.121-.126 Subsidence Control - DWD

Although a subsidence control and monitoring plan have been proposed, there has been no data or information presented to date that indicates a status of subsidence conditions. The applicant shall present a subsidence monitoring plan in accordance with this regulation and UMC 784.20.

UMC 817.150-.156 Class I Roads - JRH
UMC 817.160-.166 Class II Roads - JRH
UMC 817.170-.176 Class III Roads - JRH

References made by the operator to roads is in Section 3.2.10 and Plate 3-1 of the MRP.

The operator has categorized the roads within the permit area. The Forest Service Road is classified as a Class I road through the surface facilities. The operator has further indicated that this road will remain as part of the post-mining land use, in accordance with the approval of the Forest Service. The operator needs to incorporate into the MRP, documentation from the Forest Service of approval for this road to remain. Additionally, those other features which are to remain as part of the post-mining land use should also be included in the approval by the Forest Service, including, but not limited to, the parking area and other pads which are to be left upon reclamation.

The operator does not describe within the referenced sections of the MRP, the detailed design criteria which are required for the construction and the use of the roads. No reference is made regarding approval of use or capacity of the road design for which it was approved. There are currently production limitations issued

by Air Quality on the existing haul road. These requirements have not been presented in the sections referenced by the operator. Please re-address this section and more closely reference it to the requirements for roads, as required in the MRP. Include those conditions and approvals as necessary in order to maintain and assure the Division that compliance has been accomplished with the other agencies involved.

UMC 817.180-.181 Other Transportation Facilities - JRH

The operator has referenced the requirements of this section to Section 3.2.10 of the MRP and to Plate 3-1.

The operator has not referenced all of the required information which is found within the text of the MRP. Plates 3-11, 3-12, and 3-13 should also be included in the reference. The description of the coal screening and loadout facilities should also be included in the MRP. Approvals for the new facilities as proposed shall also be required by the Forest Service and by Air Quality in order to determine this section complete.

In general, the location and the design of the loadout facilities meet the requirements of the Division. The new structures are to be constructed within the existing disturbed area boundary and will not significantly contribute additional runoff or sediment volume to the sediment pond. However, a more detailed narrative description of the transportation facilities needs to be incorporated into the MRP.

First, the operator needs to describe the design and the construction of the facilities, their operation and maintenance, and the reclamation of these facilities. The identification of the structures and their use is found on Plate 3-1, but no clear description is found for the use and the reclamation of the facilities within the MRP. Please re-address this section of the regulations within the context of the requirements of this section.

jr
1509R/1:15